

CLAIMS

1. Process for the construction of a segment of an open-air work by prefabricated structural members of reinforced concrete, comprising the steps of:

- arranging a first and a second prefabricated structural members (18, 19), each of which includes an upright portion (22) and at least a cover portion (26) connected to the upright portion (22),
- installing the first structural member (18) by resting a free end (20) of its upright portion (22) on a respective foundation portion (12),
- installing the second structural member (19) by resting a free end (20) of its upright portion (22) on a respective foundation portion (12), in such a manner that the two structural members (18, 19) are arranged symmetrically with the free ends (24) of the cover portions (26) of the first and of the second structural member (18, 19) arranged mutually opposite,

characterized in that each of the two structural members (18, 19) has a cavity in correspondence of said cover portion (26), in that the cavities of the two structural members (18, 19) are substantially aligned in order to constitute a continuous channel (34), and in that it includes the operation of executing a casting (36) during the work, within the said

continuous channel (34), in order to make a beam superimposed to the two structural members (18, 19) and fastened to them.

2. Process according to claim 1, characterized in that each structural member (18, 19) is a prefabricated member including a plurality of reinforced concrete bodies (22, 28, 26) connected to each other by means of main reinforcing rods which project between adjacent reinforced concrete bodies (22, 28, 26), each structural member (18, 19) being adapted to be articulated as a result of the bending of the main reinforcing rods, and in that the step of installing the structural members (18, 19) comprises the bending of the main reinforcing rods until both the structural members (18, 19) assume a substantially overturned-L configuration.

3. Process according to claim 1 or 2, characterized in that it comprises the step of inserting a rectilinear reinforcement (40) constituted by auxiliary reinforcing rods (42) in the channel (34) defined by the cavities of the cover portions (26), before the casting (36) for forming the beam superimposed to the two structural members (18, 19) is executed during the work.

4. Process according to anyone of claims 1 to 3, characterized in that it comprises the step of inserting reinforcing rods (44, 46) transversely to the axis of the work between contiguous segments (15) of the work, and reinforcing rods (48) parallel to the axis of the work in proximity of the free ends (24) of the cover portions (26) of the structural members (18, 19) and in correspondence of spaces (50) defined between adjacent bodies (22, 28, 26) of the structural members (18, 19), and the phase of making simultaneously during the work a plurality of beams superimposed to respective segments (15) of the work, by means of a single concrete casting (36), so that the structural members (18, 19) of each segment (15) and a plurality of contiguous segments (15) of the work are connected to each other.

5. Process according to claim 4, characterized in that each structural member (18, 19) has an appendage (21) defined at the free end (20) of its upright portion (22) by a cylindrical surface, and in that the step of installing each structural member (18, 19) comprises the operation of forming, on the respective foundation portion (12), a cylindrical seat corresponding to said appendage (21) by means of a

concrete casting executed during the work between the structural member (18, 19) and the respective foundation portion (12), so that a static hinge for the articulation of the structural member (18, 19) with respect to the foundation portion (12) is made, a packing of anti-friction material being preferably interposed between said appendage (21) and said cylindrical seat.

6. Prefabricated structural member for the manufacturing of a segment (15) of an open-air work, comprising an upright portion (22) for resting the structural member (18, 19) on a foundation portion (12), and at least a cover portion (26) connected to the upright portion (22),

characterized in that said cover portion (26) has a cavity (34) intended to receive a portion of a continuous beam made by means of a casting (36) executed during the work, which is superimposed to a pair of structural members (18, 19) arranged symmetrically opposed.

7. A structural member according to claim 6, characterized in that it comprises a plurality of prefabricated bodies (22, 28, 26) of reinforced concrete, which are connected to each other by means of

main reinforcing rods which project between adjacent reinforced concrete bodies (22, 28, 26), in such a manner that the structural member (18, 19) can be articulated as a result of the bending of the main reinforcing rods in correspondence of zones between adjacent reinforced concrete bodies (22, 28, 26).

8. Structural member according to claim 7, characterized in that said reinforced concrete bodies include a first rectilinear end body defining an upright portion (22), an intermediate body defining a slanted portion (28) in the condition installed of the structural member (18, 19), and a second rectilinear end body defining a bracket portion (26), wherein said bracket portion (26) has a substantially U shaped cross-sectional section defining a longitudinal channel (30), the free end (24) of which, directed to the opposite of said intermediate body (28), being axially open.

9. Structural member according to claim 8, characterized in that said longitudinal channel (30) is delimited sideways by tapered sidewalls (32) the height of which decreases towards the free end (24) of the bracket portion (26).

10. Structural member according to claim 9, characterized in that secondary reinforcing rods (38) extend from said tapered sidewalls (32).

11. Structural member according to claim 10, characterized in that it is provided with adjustable extension bearing members (25) at the free end (24) of the bracket portion (26), in order to allow to change the distance thereof from another structural member (18, 19) arranged symmetrically and the respective opposite bracket portion (26).

12. Structural member according to anyone of claims 9 to 11, characterized in that said upright portion (22) has an appendage (21) at the free end (20), which defines a convex cylindrical surface intended to rest in a seat of corresponding shape manufactured during the work on a foundation portion (12) in order to rest the structural member (18, 19), a packing of anti-friction material being preferably interposed between said appendage (21) and said corresponding seat.